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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,657	09/26/2003	Jan Boer	Boer 8-28-6-6	2318

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EXAMINER	
SINKANTARAKORN, PAWARIS	
ART UNIT	PAPER NUMBER
2464	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,657	BOER ET AL.	
	Examiner	Art Unit	
	Pao Sinkantarakorn	2464	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 6/11/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 18 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 1-10 and 18-23 are currently pending in the application. Claims 11-17 are canceled.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 18-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 18-23 fail to recite any structural tie to any class of invention and therefore do not satisfy the threshold tie to be eligible for

patent protection under 35 U.S.C. 101. While the claim(s) recites a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps and, therefore, do not qualify as a statutory process. In particular, the method includes the steps of: monitoring for an acknowledgement message and monitoring to detect a collision of the acknowledgement message, all of which appear purely directed to mental steps or mathematical manipulations of functions. The claims fail to positively recite the other statutory class (machine or apparatus) by not identifying the machine or apparatus that accomplishes the method steps. The steps might imply that a machine or apparatus is being used, but the steps do not inherently require the machine or apparatus. Therefore, the method is not a patent eligible process under 35 U.S.C. 101. See Federal Circuit Court Decision, In re Bilski, Appeal No. 2007-1130.

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-10 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (USPN 5,721,733) and Currivan et al. (US 2003/0026283) in view of Kanterakis et al. (Newly Cited USPN 6,169,759).

Regarding claim 1, Wang et al. disclose a first wireless communication device, comprising:

a controller capable of receiving an acknowledgement (ACK) message transmitted by a second wireless communication device in response to a message transmitted by the first wireless communication device (see column 5 lines 25-43), and

a collision detector that monitors a wireless medium for collisions of the acknowledgement message (see column 5 line 66 – column 6 line 8).

Wang et al. do not expressly disclose a collision detector that monitors for collisions based on an energy level, preamble detection, and payload detection. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detector that monitors for collisions based on an energy level and preamble detection (see paragraphs 55-58 and 70-78, and Table 1, a collision is detected based on an energy level and a preamble detection; for example, an in-phase collision is detected when the output signal 459 is low and the output signal 457 is high, where the output signal 459 is related to the SNR indication signal 438 and the output signal 457 is related to the power indication signal).

Thus, it would have been obvious to the person of ordinary skill in the art to implement the collision detector that monitors for collisions based on an energy level and preamble detection as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detector that monitors for collisions based on an energy level and preamble detection is that it enables accurate detection of collisions (see paragraph 58).

Wang et al. and Currivan et al. do not expressly disclose a collision detector that monitors for collisions based on payload detection. However, Kanterakis et al., from the same or similar fields of endeavor, disclose a collision detector that monitors for collisions based on payload detection (see column 6 lines 45-60 and column 9 lines 8-

17, detecting collision based on the collision detection field, where the beginning of the data payload contains a collision detection field).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the collision detector that monitors for collisions based on payload detection as taught by Kanterakis et al. into the collision detecting apparatus of Wang et al. and Currivan et al.

The motivation for implementing the collision detector that monitors for collisions based on payload detection is that the collision detection field is used to relay information about the possibility of collision with other simultaneously transmitting remote stations (see column 9 lines 13-14), which allows the station to stop further transmission of data (see column 6 lines 56-60) to lower the bandwidth usage of the network.

Regarding claim 2, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the collision detector evaluates the energy level and detects a collision based on the energy level and the preamble detection. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module evaluates power indication signal (see paragraphs 70-78), and detects a collision based on the evaluated power indication signal and the preamble detection (see paragraphs 55-58 and 70-78, and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement the collision detection module, wherein the module evaluates power

indication signal and detects a collision based on the evaluated power indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing the collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal and the preamble detection is that it enables accurate detection of collisions (see paragraph 58).

Regarding claim 3, Wang et al. and Currivan et al. do not expressly disclose a payload detector that detects for collisions based on the detected payload. However, Kanterakis et al., from the same or similar fields of endeavor, disclose a payload detector that detect for collisions based on the detected payload (see column 6 lines 45-60 and column 9 lines 8-17, detecting collision based on the collision detection field, where the beginning of the data payload contains a collision detection field).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the payload detector that detects for collisions based on the detected payload as taught by Kanterakis et al. into the collision detecting apparatus of Wang et al. and Currivan et al.

The motivation for implementing the payload detector that detects for collisions based on the detected payload is that the collision detection field is used to relay information about the possibility of collision with other simultaneously transmitting remote stations (see column 9 lines 13-14), which allows the station to stop further transmission of data (see column 6 lines 56-60) to lower the bandwidth usage of the network.

Regarding claim 4, Wang et al. do not expressly disclose a preamble detector that detects for collisions based on the detected preamble. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a preamble detector that detects a collision based on the evaluated power indication signal and the preamble detection (see paragraphs 55-58).

Thus, it would have been obvious to the person of ordinary skill in the art to implement the preamble detector that detects for collisions based on the detected preamble as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing the preamble detector that detects for collisions based on the detected preamble is that it enables accurate detection of collisions (see paragraph 58).

Regarding claim 5, Wang et al. disclose the collision detector is activated after the medium access wireless communication device transmits data (see column 5 line 66 – column 6 line 8);

regarding claim 6, the collision detector does not detect a collision if an ACK message or data header is received (see column 5 line 66 – column 6 line 8);

regarding claim 8, the controller determines if the second wireless communication device correctly received the transmitted message by monitoring the wireless medium (see column 5 line 66 – column 6 line 8);

regarding claim 9, the controller determines that the second wireless communication device did not likely receive the message if a collision is detected (see column 5 line 66 – column 6 line 8);

regarding claim 10, the controller determines that the collision was a cause of not receiving the ACK message (see column 5 line 66 – column 6 line 8).

Regarding claim 7, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the device is implemented in accordance with the IEEE 802.11 Standard. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose an 802.11-standard device (see paragraph 130, OFDMA; The modulation scheme used in 802.11 is OFDM).

Thus, it would have been obvious to the person of ordinary skill in the art to utilize an 802.11-standard device as taught by Currivan et al. in the collision detecting apparatus of Wang et al.

The motivation for utilizing an 802.11-standard device in the collision detecting apparatus is that it provides a faster transmission rate and more reliable.

Regarding claim 18, Wang et al. disclose a method for detecting a collision in a wireless communication network, the method comprising the steps of:

monitoring the wireless communication network for an acknowledgement message received in response to transmitted data (see column 5 lines 25-43); and

monitoring the wireless communication network to detect a collision of the acknowledgement message (see column 5 line 66 – column 6 line 8).

Wang et al. do not expressly disclose a method for monitoring for a collision based on an energy level, preamble detection, and payload detection. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detector that monitors for collisions based on an energy level and preamble detection (see paragraphs 55-58 and 70-78, and Table 1, a collision is detected based on an energy level and a preamble detection; for example, an in-phase collision is detected when the output signal 459 is low and the output signal 457 is high, where the output signal 459 is related to the SNR indication signal 438 and the output signal 457 is related to the power indication signal).

Thus, it would have been obvious to the person of ordinary skill in the art to implement the method for monitoring for a collision based on an energy level and preamble detection as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing the method for monitoring for a collision based on an energy level and preamble detection is that it enables accurate detection of collisions (see paragraph 58).

Wang et al. and Currivan et al. do not expressly disclose a method for monitoring for a collision based on payload detection. However, Kanterakis et al., from the same or similar fields of endeavor, disclose a collision detector that monitors for collisions based on payload detection (see column 6 lines 45-60 and column 9 lines 8-17, detecting collision based on the collision detection field, where the beginning of the data payload contains a collision detection field).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the method for monitoring for a collision based on payload detection as taught by Kanterakis et al. into the collision detecting apparatus of Wang et al. and Currivan et al.

The motivation for implementing the method for monitoring for a collision based on payload detection is that the collision detection field is used to relay information about the possibility of collision with other simultaneously transmitting remote stations (see column 9 lines 13-14), which allows the station to stop further transmission of data (see column 6 lines 56-60) to lower the bandwidth usage of the network.

Regarding claim 19, Wang et al. and Currivan et al. do not expressly disclose a method for detecting a payload and the collision detection is further based on the detected payload. However, Kanterakis et al., from the same or similar fields of endeavor, disclose a payload detector that detect for collisions based on the detected payload (see column 6 lines 45-60 and column 9 lines 8-17, detecting collision based on the collision detection field, where the beginning of the data payload contains a collision detection field).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the method for detecting a payload and the collision detection is further based on the detected payload as taught by Kanterakis et al. into the collision detecting apparatus of Wang et al. and Currivan et al.

The motivation for implementing the method for detecting a payload and the collision detection is further based on the detected payload is that the collision detection

field is used to relay information about the possibility of collision with other simultaneously transmitting remote stations (see column 9 lines 13-14), which allows the station to stop further transmission of data (see column 6 lines 56-60) to lower the bandwidth usage of the network.

Regarding claim 20, Wang et al. do not expressly disclose a method for detecting a preamble and the collision detection is further based on the detected preamble. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a preamble detector that detects a collision based on the evaluated power indication signal and the preamble detection (see paragraphs 55-58).

Thus, it would have been obvious to the person of ordinary skill in the art to implement the method for detecting a preamble and the collision detection is further based on the detected preamble as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing the method for detecting a preamble and the collision detection is further based on the detected preamble is that it enables accurate detection of collisions (see paragraph 58).

Regarding claim 21, Wang et al. disclose a method, wherein the monitoring steps are performed after the data is transmitted (see column 5 line 66 – column 6 line 8);

regarding claim 22, the monitoring for the acknowledgement message step does not detect a collision if an ACK message or data header is received (see column 5 line 66 – column 6 line 8).

Regarding claim 23, Wang et al. disclose all the subject matter of the claimed invention except the method is implemented in accordance with the IEEE 802.11 Standard. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose an 802.11-standard device (see paragraph 130, OFDMA; The modulation scheme used in 802.11 is OFDM).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to utilize an 802.11-standard device as taught by Currivan et al. in the collision detecting apparatus of Wang et al.

The motivation for utilizing an 802.11-standard device in the collision detecting apparatus is that it provides a faster transmission rate and more reliable.

Conclusion

10. **Examiner's Note**: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure

relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is (571)270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. S./
Examiner, Art Unit 2464

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2464